CLAIMS

1. A combination appliance for cooling and cooking a food item, comprising:

a frame comprising a cooking chamber and a refrigeration module chamber, and the cooking chamber having a first access opening through which access to the interior of the cooking chamber is provided;

a door moveably mounted to the frame for movement between an open position where the first access opening is uncovered and a closed position where the first access opening is covered;

a heat element disposed within the cooking chamber to selectively provide heat to the cooking chamber;

an inlet duct extending between the refrigeration module chamber and the cooking chamber, the inlet duct having an inlet in communication with the refrigeration module chamber and an outlet in communication with the cooking chamber;

a return duct extending between the refrigeration module chamber and the cooking chamber, the return duct having an inlet in communication with the cooking chamber and an outlet in communication with the refrigeration module chamber;

a refrigeration module comprising a compressor, condenser, evaporator, and base on which the compressor, condenser, and evaporator are mounted to form a module, and an insulated housing overlying the evaporator to thermally isolate the evaporator from the condenser, the insulated housing having an inlet and an outlet, which align with the outlet of the return duct and the inlet of the inlet duct, respectively, when the refrigeration module is mounted within the refrigeration module chamber, to thereby form a refrigerated air path between the evaporator and the cooking chamber.

2. The combination appliance according to claim 1 wherein the frame further comprises a second access opening through which access to the interior of the refrigeration module chamber is provided and the second access opening is sized to receive the refrigeration module.

3. The combination appliance according to claim 2 wherein the refrigeration module chamber comprises a peripheral side wall and the second access opening is located in the peripheral side wall permitting the sliding insertion and removal of the

refrigeration module from the refrigeration module chamber through the second access opening.

4. The combination appliance according to claim 3 wherein the frame has a front side and the first and second access openings are located on the front side.

5. The combination appliance according to claim 1 wherein the cooking chamber comprises a top wall, bottom wall, and a peripheral wall connecting the top and bottom walls, and the outlet of the inlet duct and the inlet of the return duct extend through the peripheral wall.

6. The combination appliance according to claim 5 wherein the outlet of the inlet duct is positioned above the inlet of the return duct.

7. The combination appliance according to claim 6 wherein the outlet of the inlet duct is located in an upper portion of the cooking chamber near the top wall.

8. The combination appliance according to claim 7 wherein the inlet of the return duct is located in a lower portion of the cooking chamber near the bottom wall.

9. The combination appliance according to claim 8 wherein the peripheral wall comprises parallel side walls and a rear wall connecting the side walls at rear edges there of to form spaced rear corners of the cooking chamber and the inlet of the return duct is located on either the rear wall and one of the side walls and the outlet of the inlet duct is located on the other of the rear wall and the one of the side walls.

10. The combination appliance according to claim 9 wherein the inlet of the return duct and the outlet of the inlet duct are adjacent the rear corner formed by the rear wall and the one of the side walls.

11. The combination appliance according to claim 5 wherein the inlet duct and the outlet duct are positioned exteriorly of the cooking chamber.

12. The combination appliance according to claim 11 and further comprising an exterior cabinet mounted to the frame and spaced from the peripheral wall of the

cooking chamber to define a gap therebetween in which the inlet duct and the outlet duct are positioned.

13. The combination appliance according to claim 12 and further comprising insulation disposed within the gap.

14. The combination appliance according to claim 5 wherein the refrigeration chamber comprises a top wall from which depends a peripheral wall, and the top wall of the refrigeration chamber is positioned beneath the bottom wall of the cooking chamber.

15. The combination appliance according to claim 14 wherein the top wall of the refrigeration chamber is spaced from the bottom wall of the cooking chamber to form a gap and further comprising insulation disposed within the gap.

16. The combination appliance according to claim 1 wherein at least a portion of the base is thermally conductive and the condenser is conductively mounted to the base to transfer the heat from the condenser to the thermally conductive portion of the base to dissipate the heat from the condenser.

17. The combination appliance according to claim 16 and further comprising at least one thermally conductive mount connecting the condenser to the base whereby the heat from the condenser is conducted to the base through the at least one thermally conductive mount.

18. The combination appliance according to claim 16 wherein the evaporator is thermally isolated from the base to retard the conduction of heat from the base to the evaporator.

19. The combination appliance according to claim 18 wherein at least a portion of the base is made of thermally non-conductive material and the evaporator is mounted to the thermally non-conductive material to thermally isolate the evaporator from the base.

20. The combination appliance according to claim 18 and further comprising a thermally non-conductive mount connecting the evaporator to the base to thermally isolate the evaporator from the base.

21. The combination appliance according to claim 20 wherein the thermally non-conductive mount forms a catch pan and includes a sloped channel having an outlet disposed above the base to collect and drain condensation from the evaporator onto the base.

22. The combination appliance according to claim 21 wherein the thermally non-conductive mount comprises a layer of insulation positioned between the evaporator and the base and in which are formed the catch pan and sloped channel and multiple thermally non-conductive blocks connecting the evaporator to the base.

23. The combination appliance according to claim 21 and further comprising a condenser fan for drawing or blowing air along an air-flow path through the condenser and over the channel to enhance the evaporation of the condensation as it moves down the channel and onto the base.

24. The combination appliance according to claim 23 wherein base forms an evaporator pan for collecting the condensation from the channel and the heat conducted to the base from the condenser enhances the evaporation of the condensation in the evaporator pan.

25. The combination appliance according to claim 24 wherein the condenser fan is positioned on the base such that the condenser air-flow path passes over the evaporator pan to enhance the evaporation of the condensation.

26. The combination appliance according to claim 25 wherein the heat generator is an electric heating element.

27. A modular refrigeration unit comprising:

a base having at least a portion of which is thermally conductive;

a compressor mounted on the base;

a condenser fluidly coupled to the compressor and mounted on the base such that heat generated by the condenser is conducted to the thermally conductive portion of the base; and

an evaporator fluidly coupling the condenser and the compressor is mounted on the base such that condensation forming on the evaporator will collect on the thermally conductive portion of the base;

wherein the heat conducted to the base from the compressor enhances the evaporation of the condensation collected on the base.

28. The modular refrigeration unit according to claim 27 and further comprising at least one thermally-conductive mount connecting the condenser to the thermally-conductive portion of the base whereby the heat from the condenser is conducted to the base through the at least one thermally-conductive mount.

29. The modular refrigeration unit according to claim 28 wherein the evaporator is thermally isolated from the base to retard the conduction of heat from the base to the evaporator.

30. The modular refrigeration unit according to claim 28 wherein at least a portion of the base is made of thermally non-conductive material and the evaporator is mounted to the thermally non-conductive material to thermally isolate the evaporator from the base.

31. The modular refrigeration unit according to claim 30 and further comprising a thermally non-conductive mount connecting the evaporator to the base to thermally isolate the evaporator from the base.

32. The modular refrigeration unit according to claim 31 wherein the thermally non-conductive mount forms a catch pan and includes a sloped channel having an outlet disposed above the base to collect and drain the condensation from the evaporator onto the base.

33. The modular refrigeration unit according to claim 32 wherein the thermally non-conductive mount comprises a layer of insulation positioned between the

evaporator and the base and in which are formed the catch pan and sloped channel and multiple thermally non-conductive blocks connecting the evaporator to the base.

34. The modular refrigeration unit according to claim 32 and further comprising a condenser fan for drawing or blowing air along an air-flow path through the condenser and over the channel to enhance the evaporation of the condensation as it moves down the channel and onto the base.

35. The modular refrigeration unit according to claim 34 wherein the base forms an evaporator pan for collecting the condensation from the channel whereby the heat conducted to the base from the condenser enhances the evaporation of the condensation in the evaporator pan.

36. The modular refrigeration unit according to claim 35 wherein the condenser fan is positioned on the base such that the condenser air-flow path passes over the evaporator pan to enhance the evaporation of the condensation.

37. The modular refrigeration unit according to claim 36 wherein the insulated housing abuts the thermally non-conductive mount to substantially enclose the evaporator.

38. A refrigerated oven for cooling and cooking a food item, comprising:

a frame comprising a cooking chamber and a refrigeration chamber, the cooking chamber having a first access opening through which access to the interior of the cooking chamber is provided;

a door moveably mounted to the frame for movement between an open position where the first access opening is uncovered and a closed position where the first access opening is covered;

a heat element disposed within the cooking chamber to selectively provide heat to the cooking chamber;

an inlet duct extending between the refrigeration chamber and the cooking chamber, the inlet duct having an inlet in communication with the refrigeration chamber and an outlet in communication with the cooking chamber;

a return duct extending between the refrigeration chamber and the cooking chamber, the return duct having an inlet in communication with the cooking chamber and an outlet in communication with the refrigeration chamber;

an evaporator positioned within the refrigeration chamber having one side in fluid communication with the inlet of the inlet duct and another side in fluid communication with the outlet of the return duct to form a cold air circulation path;

an evaporator fan positioned within the cold air circulation path to circulate air along the path and through the evaporator;

a thermally non-conductive evaporator pan disposed beneath the evaporator for collecting condensation from the evaporator;

a condenser positioned within the refrigeration chamber and fluidly connected to the evaporator, the condenser being thermally conductively coupled to the thermally conductive evaporator pan to enhance the evaporation of condensation collected in the evaporator pan; and

a condenser fan for forcing or drawing air through the condenser along an air-flow path within the refrigeration chamber such that the air passes over the evaporator pan to enhance the evaporation of the condensation in the evaporator pan.

39. The refrigerated oven according to claim 38 and further comprising at least one thermally conductive mount connecting the condenser to the evaporator pan whereby the heat from the condenser is conducted to the base through the at least one thermally conductive mount.

40. The refrigerated oven according to claim 39 and further comprising a thermally non-conductive mount connecting the evaporator to the evaporator pan to thermally isolate the evaporator from the evaporator pan.

41. The refrigerated oven according to claim 40 wherein the thermally non-conductive mount forms a catch pan and includes a sloped channel having an outlet disposed above the evaporator pan to collect and drain the condensation from the evaporator into the evaporator pan.

42. The refrigerated oven according to claim 41 wherein the thermally non-conductive mount comprises a layer of insulation positioned between the evaporator and the base and in which are formed the catch pan and sloped channel and multiple thermally non-conductive blocks connecting the evaporator to the base.

43. The refrigerated oven according to claim 42 wherein the air-flow path passes over the channel to enhance the evaporation of the condensation as it moves down the channel and onto the evaporator pan.

44. The refrigerated oven according to claim 43 and further comprising a base to which the condenser, evaporator, condenser fan, and evaporator fan are mounted and in which the evaporator pan is integrally formed to form a modular refrigeration unit.

45. The refrigerated oven according to claim 44 and further comprising an insulated housing overlying the evaporator to thermally isolate the evaporator from the condenser.

46. The refrigerated oven according to claim 45 wherein the insulated housing abuts the thermally non-conductive mount to substantially enclose the evaporator.